



wherein

the rings containing A and B have a double bond in the allowed position having an aromatic character;

A and B are selected from sulfur (S), oxygen (O) or CR⁹, R⁹ being hydrogen, a C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₂-C₂₀-alkenyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl, or C₇-C₂₀-arylalkyl radical, optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements, with the proviso that if A is S or O, B is CR⁹ or if B is S or O, A is CR⁹, and A and B cannot simultaneously be CR⁹;

R¹, R², R³, R⁴, R⁵, R⁶, R⁷, and R⁸ which may be the same as or different from each other, are hydrogen, a C₁-C₂₀-alkyl,

C_3-C_{20} -cycloalkyl, C_2-C_{20} -alkenyl, C_6-C_{20} -aryl, C_7-C_{20} -alkylaryl, or C_7-C_{20} -arylalkyl radical, optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements, and at least two adjacent substituents R^1 and R^2 , R^3 and R^4 , or R^5 and R^6 can form a ring comprising 4 to 8 atoms, and where at least one of R^1 , R^2 , R^3 , R^4 , R^7 and R^8 is not hydrogen;

M is an atom of a transition metal selected from group 3, 4, 5, 6 or the lanthanide or actinide groups in the Periodic Table of the Elements,

X , which may be the same as or different from each other, is hydrogen, halogen atom, a R^{10} , OR^{10} , OSO_2CF_3 , $OCOR^{10}$, SR^{10} , NR^{10}_2 or PR^{10}_2 group, wherein the substituents R^{10} are hydrogen, a C_1-C_{20} -alkyl, C_3-C_{20} -cycloalkyl, C_2-C_{20} -alkenyl, C_6-C_{20} -aryl, C_7-C_{20} -alkylaryl, or C_7-C_{20} -arylalkyl radical, optionally containing heteroatoms belonging to groups 13 or 15-17 of the Periodic Table of the Elements;

p is an integer of from 1 to 3, being equal to the oxidation state of the metal M minus 2;

and

(B) at least one member selected from the group consisting of an alumoxane and a compound of formula D^+E^- , wherein D^+ is a Brønsted acid, which gives a proton and reacts irreversibly with a substituent

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AMENDMENT AFTER FINAL REJECTION

PATENT

X of the metallocene of formula (I) and E⁻ is a compatible anion, which stabilizes the active catalytic species originating from the reaction of the two compounds, and which is removed by an olefinic monomer.